

CLAIMS

What is claimed is:

1. The method of designing and constructing an optimum vacuum cleaning system for an automotive vehicle, comprising:
 - locating the internal surfaces of the vehicle, which are within the reach zone of the driver of the vehicle;
 - 5 providing a length of suction hose sufficiently long to reach around said reach zone and adjacent portions of the vehicle, selecting one of said surfaces to provide a space adjacent thereto sufficiently large to accommodate said suction hose;
 - providing a vacuum supply system to said hose;
 - providing controls to activate and deactivate said vacuum supply system;
 - 10 locating said controls in a surface accessible to the driver within said zone, and providing means for disabling said vacuum system while the vehicle is in motion, and whereby cleaning can be done before dirt and stain interacts with the environment.
2. The method of claim 1 wherein said controls are located between the driver seat and the passenger seat of said automotive vehicle.
3. The method of claim 1 wherein said controls are located under the driver seat of said automotive vehicle.
4. The method of claim 1 wherein said controls are located adjacent the headliner of said automotive vehicle.
5. The method of claim 1 wherein said controls are located in the seat back of the of the front passenger seat of said automotive vehicle.

6. The method of claim 1 wherein said controls are located under the rear passenger seat of the automotive vehicle.

7. The method of designing and constructing a vacuum cleaning system for an automotive vehicle comprising:

locating the internal surfaces of the vehicle which are within the reach zone of the driver of the vehicle;

5 providing a portable vacuum cleaning unit to be powered by the electrical system of the vehicle;

selecting one of said internal surfaces of the vehicle that are within the reach zone of the driver and which has a space behind the surface which is sufficiently large to accommodate said portable vacuum cleaning unit, and;

10 providing means for disabling said portable unit when the vehicle is in a drive mode.

8. The method of claim 7 wherein said internal surface is between the driver seat and the front passenger seat of said automotive vehicle.

9. The method of claim 7 wherein said internal surface is under the driver seat of said automotive vehicle.

10. The method of claim 7 wherein said internal surface is adjacent to the headliner of said automotive vehicle.

11. The method of claim 7 wherein said internal surface is in the seat back of the front passenger seat of said automotive vehicle.

12. The method of claim 7 wherein said internal surface is under the rear passenger seat of said automotive vehicle.

13. Vacuum cleaning apparatus for an automotive vehicle comprising:
a portable vacuum cleaning unit means in said vehicle for storing said portable unit;
a power supply for said portable unit, and;
5 means for disabling said unit when the vehicle is in a drive mode.

14. The apparatus of claim 13 wherein said power supply is provided by a power cord connected to the electrical system of the vehicle, and said last mentioned means disconnects said power cord from said portable unit.

15. The portable cleaning apparatus of claim 13 wherein the unit has an internal electric motor and a battery for a power supply to said motor, and said last mentioned means disconnects said battery from said motor.

16. The portable cleaning apparatus of claim 13 wherein said portable vacuum cleaning unit is located within reach zone of the driver seat comprises a length of suction hose sufficiently long to reach around the reach zone of the driver and adjacent portions of the automotive vehicle.

17. The portable cleaning apparatus of claim 13 wherein said portable vacuum cleaning unit further comprises controls to activate and deactivate said vacuum cleaning unit, said controls being located within the reach zone of the driver of the automotive vehicle.

18. A vacuum cleaning system for an automotive vehicle, comprising:
a length of vacuum hose,

- 5 a reel, said hose being adapted to be mounted on said reel;
 a storage space in said vehicle for said reel, and;
 automatic means preventing said hose from being removed from said
storage space when said vehicle is in a drive mode.

19. The system of claim 18 wherein said last mentioned means prevents said hose from being removed from said reel.

20. The system of claim 18 wherein said last mentioned means prevents said reel from turning when the vehicle is in a drive mode.

21. The system of claim 18 including a manually operated disabling means for said automatic disabling means.

22. The vacuum cleaning system of claim 18 wherein said length of vacuum hose is sufficient to reach around the reach zone of the driver of the automotive vehicle.

23. The vacuum cleaning system of claim 18 further comprising controls to activate and deactivate said vacuum cleaning system, said controls being located within the reach zone of the driver of the automotive vehicle.

24. A vacuum cleaning system for an automotive vehicle comprising:
 a length of flexible vacuum hose;
 a storage space in said vehicle for said flexible vacuum hose, and;
 means preventing said hose from being withdrawn from said storage space
5 when the vehicle is in drive mode.

25. The vacuum cleaning system of claim 24 wherein said length of vacuum hose is sufficiently long to reach around the reach zone of the driver of the automotive vehicle.

26. The vacuum cleaning system of claim 24 further comprising controls to activate and deactivate said vacuum cleaning system, said controls being located within the reach zone of the driver of the automotive vehicle

27. A built in vacuum cleaning system for an occupant of motor vehicle including a driver and wherein each occupant has a reach zone when seated in the vehicle, and there being internal surfaces of the vehicle that are within the reach zone of the driver and are outside of the reach zone of the other occupants of the vehicle, said
5 system comprising:

a length of flexible vacuum hose one end of which is fixed to the vehicle;
a storage space in the vehicle for said flexible vacuum hose,
locking means for preventing said hose from being withdrawn from said
storage space, and;

10 control means for disabling said locking means to permit said hose to be withdrawn from said storage space, said control means being located in a portion of the reach zone of the driver and which is outside of the reach zone of the other occupants of the vehicle.